

Assessing Contributions of the Individual Deprivation Measure

June 2020

INTRODUCTION AND EXECUTIVE SUMMARY

About the IDM

The Individual Deprivation Measure (IDM) is an individual-level, gender-sensitive measure of multidimensional poverty, underpinned by a twelve year, multi-stage research program. Motivated by a desire to improve existing measures of poverty to make it possible to assess the relationship between gender and poverty, an interdisciplinary team set out to answer the question: What is a just and justifiable measure of poverty that is sensitive to gender and capable of revealing gender disparities where they exist? Foundational research and testing of the IDM was undertaken through a four-year, international, interdisciplinary research collaboration, led by the Australian National University (ANU) in partnership with the International Women's Development Agency (IWDA) and the Philippines Health Social Science Association, University of Colorado at Boulder, and Oxfam Great Britain (Southern Africa), with additional support from Oxfam America and Oslo University. This project, 'Assessing development: designing better indices of poverty and gender', was funded by the Australian Research Council and partnership organisations (LP0989385). The IDM measure and tool was the result.

A three-phase research design used mixed methods to develop a new approach to measuring multidimensional poverty, and was informed by participatory and feminist research methodologies. The fieldwork involved thousands of participants with lived experience of poverty across 18 sites in six countries. Grounded in the insights from participatory research, the views of men and women experiencing poverty, civil society organisations working on the ground for change, and feminist and development scholarship, the IDM was developed to assess 15 dimensions of life that women and men experiencing poverty said mattered. The IDM's approach of sampling all adults in a household was also informed by the relevant literature and selected for its power to provide insights on within-household differences. A successful proof of concept trial in the Philippines demonstrated that individual-level, multidimensional, gender-sensitive and scalar measurement of poverty is both possible and desirable.

The first IDM study beyond this proof-of-concept trial was subsequently carried out in Fiji (2014–17) by IWDA working with Fiji Bureau of Statistics, with funding support from the Australian Government's Department of Foreign Affairs and Trade (DFAT) in Fiji. This study focused in areas previously identified by a World Bank study as having a high incidence of poverty. The study confirmed the IDM as a tool that extends available insights into multidimensional poverty. It also identified aspects of the measure and survey that would benefit from further testing and refinement.

In 2016, as part of a wider focus on closing gender data gaps, the Australian Government made a further investment in the ANU and IWDA to ready the IDM for global use. From 2016-2020 the IDM Program teams at ANU and IWDA delivered significant methodological updates including revised survey instruments, dimension scoring and index construction, four additional datasets from varied contexts in Asia, the Pacific and Africa, a prototype of data visualisation and data querying capability, regular contributions to global discourses on individual and gender-sensitive multidimensional poverty measurement and addressing gender data gaps.

About this paper

The current IDM program will be completed on 30 June 2020. A multi-component end-line review will assess and report on the extent to which the IDM Program has achieved its intended outcomes, identify any unintended outcomes, capture lessons related to the enablers and inhibitors to achievement in this Program, and inform future directions. This will involve a series of separate evaluative activities, including related studies to assess the costs and contributions of the IDM. Development Initiatives was contracted to undertake both the costs and the contributions reviews. The focus of the contributions study, of which this

report is the output, is providing an assessment of the IDM's contribution to the measurement landscape of both poverty and inequality, in relation to the dimensions measured by the IDM. The companion study on costs considered the implementation contexts to date for the IDM and the experience of other multi-topic surveys to assess the IDM's costs comparatively and identify issues for consideration in moving forward. A tool was also developed for estimating the costs of undertaking an IDM survey, for future use. Together, the costs and contributions studies will help inform assessment of the IDM's value.

Context

Household surveys provide the data used for most poverty measurement tools. They underlie the World Bank's poverty estimates, national poverty estimates and multidimensional poverty estimates. Traditional household surveys have a range of limitations, which are particularly relevant in the context of poverty measurement. The poorest may not be in a household (for example, those who are homeless, living in orphanages or in refugee or IDP camps). Censuses may systematically undercount populations and households in informal settlements and slums. Sampling frames drawn from outdated censuses will undercount the most rapidly expanding urban populations. Exclusion of particular populations from household data collection can then be compounded by the approach taken to interviewing respondents in the sampled household. Many household surveys interview one person (typically the 'household head' and assume that all members of a household share the same economic circumstances). Ignoring within household differences in circumstances has been estimated to lead to an under-estimation of global poverty and inequality by around one-third (Wagstaff and Kanbur, 2014).

A range of efforts have sought to improve the accuracy of household surveys as a source of poverty data, by broadening who is included in surveys and what they are asked about. Understanding the poverty of individuals rather than just households, in relation to aspects of life beyond money, has been a key focus.

This note examines the contributions of one effort to improve poverty measurement, the Individual Deprivation Measure, which seeks to address a range of limitations by measuring at the individual level, across 15 dimensions, including some that are particularly important to gender-sensitivity, and sampling multiple adult household members.

Section I provides some background context about the links between poverty and gender, calls for data that makes it possible to assess this, and initiatives to improve gender statistics across countries. It then considers methodological approaches to measuring poverty and inequality, including discussions about the need for multidimensional measures to assess poverty, and existing initiatives responding to this call. The paper also considers other composite indices that provide insight into gender differences on a range of development indicators.

Section II considers other available surveys that provide data used in measuring dimensions of deprivation, and compares these with the IDM. Issues considered include capturing outcomes for the most vulnerable, sampling approaches, what disaggregation is possible, coverage of substantive dimensions of deprivation of particular relevance to highly vulnerable people, including risks faced by individuals in daily survival tasks. This section compares the IDM dimensions and themes with other key surveys (DHS, MICS, LSMS+ and pro-WEAI) and identifies areas of overlap and of the IDM's unique contribution. This section also considers specific strengths of the IDM, including the ability to analyse joint or overlapping dimensions (are people who are deprived in voice the same people who are deprived in work, and how do patterns of overlapping deprivation vary by characteristics such as gender, age and disability) and participant ranking of dimensions (what dimensions of poverty matter most, to which people). Comparison is also made at the question level.

Section III considers what this analysis means in practice by briefly comparing some of the data and insights generated by the Republic of South Africa IDM Study (2019) and the DHS (2016) in South Africa.

Key insights and findings

This table summarises key insights and findings presented in the report, organised by features of the IDM.

<p>Individual-level, gender-sensitive measurement</p>	<p>Developing measures of poverty and deprivation that are more sensitive to the resources and capabilities of individuals and households has become an important research and policy concern. The 2016 Commission on Global Poverty¹ made a series of recommendations for the World Bank to improve data on poverty, including calling for more individual-level estimates of poverty and more multidimensional poverty measures.</p> <p>The IDM combines individual-level measurement with approaches that help shed greater light on outcomes for respondents with greater vulnerability. This includes integration of the Washington Group Questions on disability and has undertaken purposive sampling of individuals with disabilities to increase the sampling of respondents with disabilities and the disaggregated analysis that is possible.</p> <p>Because the IDM collects data about older individuals (it samples adult respondents of all ages) and disability, it can contribute insights regarding the overlap between age and functional disability as measured by the Washington Group Short Set of Questions, to inform methodology and analysis.</p>
<p>Multidimensional measurement</p>	<p>The largest effort to measure multidimensional poverty, the Multidimensional Poverty Index (MPI), is constructed primarily using household-level indicators, limiting disaggregation. The international MPI does not specifically consider gender inequality and could mask significant inequalities within a household.</p> <p>The IDM provides data on many indicators beyond what is currently offered in other household surveys, The IDM also covers topics not well-covered in other surveys on particularly vulnerable groups, so provides a more nuanced understanding of the challenges faced by survey respondents in accessing resources and opportunities across a breadth of dimensions. A closer examination across different dimensions is crucial when trying to understand individual-level poverty status and vulnerability, and this is one of the main contributions of the IDM.</p>
<p>Coverage of dimensions compared to other relevant multi-topic surveys</p>	<p>Across the 15 dimensions of the IDM, there is relatively little overlap with questions on the DHS, MICS or HFS. For three IDM dimensions--education, sanitation and water--most of the data points would substantively be similar if collected by one of the other surveys. There is some overlap between asset ownership questions in the IDM and related questions in other surveys. 21% of the questions on assets in the IDM overlap with the HFS, and 5% of the questions on assets are covered by the DHS or MICS. This suggests that using IDM data to generate a wealth index like the DHS wealth index, is likely to shows unique insights.</p> <p>Areas where the IDM provides data that is not well covered by other relevant multi-topic surveys include:</p>

¹ <https://www.worldbank.org/en/programs/commission-on-global-poverty>

	<p><i>Access to basic clothing/footwear and personal care items</i> – Other surveys have data on individual health and/or ownership and rights to specific assets, but individual-level data on personal items tends to be scarce. Variation in this data is likely to highlight those at the bottom extreme of the socioeconomic distribution, or who face other extremes of treatment within their household, and are therefore a critical group to consider when examining deprivation, both between and within households.</p> <p><i>Health</i> – Comparable surveys tend to focus mainly on nutritional indicators and access to health insurance. The DHS also has a specific focus on reproductive health outcomes for women of reproductive age, and illnesses and other health-related outcomes for women’s children. However, chronic illnesses or conditions for adults (incidence and seeking treatment), and mental health disorders, are not covered in detail. Furthermore, data on older women is frequently missing because DHS and MICS generally cap their women’s surveys to exclude women over 49. The IDM contributes data in all of these areas, focusing needed attention on vulnerable groups whose visibility is otherwise limited in most surveys.</p> <p><i>Hazards, and related social norms that affect or risk the availability of resources to individuals</i> – Respondents’ perceptions of safety when they are alone inside/outside their home is also not asked in other surveys.</p> <p><i>Unpaid and paid work</i> – The degree of respect received, and risks are key for understanding women’s empowerment from economic activity but are not collected systematically in comparable large-scale surveys.</p> <p><i>Social networks, relationships and dependence</i> – The IDM asks a series of questions about respondents’ support networks including dependence on people not living with them for basic needs, whether resources are sufficient, and if the respondent feels they could reciprocate. The pro-WEAI is the only other survey to include questions on self-efficacy and intra-household relationships, although its focus is on respect rather than support.</p> <p><i>Agency and norms</i> – The IDM contributes by including respondents’ control over financial decisions and ability to voice concerns in the community (towards changing their circumstances).</p> <p><i>Legal identity documents</i> – Only the recent Tanzania LSMS+ has a similar question.</p>
<p>Within-household measurement</p>	<p>There is a clear need to better examine poverty status and vulnerability within households. A growing number of studies are using specialized or publicly available data across countries to highlight how traditional poverty measures, often collected with household-level data, can mask welfare outcomes for individuals. These have shown that households that are classified as non-poor contain cells that are poor. Similarly, within poor households there are cells that are not poor. Women and children in consumption-non-poor households are often undernourished, and vice versa.</p> <p>The IDM makes a contribution to within household analysis by combining individual-level measurement and attempting to interview all adult members in the household. This approach is also used by the more recently-developed LSMS+ and pro-WEAI.</p>

Respondent ranking of dimension	<p>The opportunity for respondents to rank the IDM's dimensions in terms of importance is not substantively included in the DHS, MICS and HFS. This generates data that can reduce the controversy of expert-based definitions of poverty or deprivation, and ground interpretation of relative deprivations in a local socioeconomic and cultural context.</p>
Overall, including the analysis of intersectional disadvantage and joint deprivation	<p>A main contribution of the IDM is to highlight outcomes for particularly vulnerable groups. It makes visible the circumstances of the most vulnerable across multiple dimensions, including highlighting how these dimensions overlap and interact with each other. This can give policy makers very specific and nuanced understanding of the challenges faced by certain populations.</p> <p>An important contribution of the IDM is to make possible examination of how areas of opportunity and deprivation overlap and interact for different cohorts. Examining how different dimensions of welfare and vulnerability interact, and as it relates to household relationship or marital status, is key for policymaking.</p> <p>The IDM allows for a joint analysis of multiple deprivations and can do so for respondents with different individual and socioeconomic characteristics. As a result, one can get a more precise picture of specific groups that are particularly vulnerable across multiple areas, along with factors associated with their situation. Policymaking, in turn, can benefit greatly from a clearer understanding of how different deprivations interact with one another in each population cohort.</p> <p>The IDM fills key gaps by increasing knowledge about intrahousehold inequalities which have generally only been superficially considered in household surveys. The IDM provides greater depth on many of the key topics measured in many of the major international surveys such as household assets, living conditions, and health. The IDM also integrates modules to the survey that are frequently collected separately such as questions about voice and food insecurity. The inclusion of these dimensions allows for more cross tabulation to identify the extent to which people are deprived across dimensions.</p> <p>IDM also allows for more intersectional analysis of poverty. This is ultimately possible because the IDM collects data at the individual level. However, it is also facilitated by the integration of the Washington Group Questions, which enable disaggregation of data by disability (with data boosted in some instances through purposive sampling), and not using age caps in surveys. These choices allow for much richer analysis of the relationship between individual characteristics and circumstances, and identification of patterns of disadvantage by social group. The scope of the IDM also adds substantially to the complexity of the survey and survey analysis. This complexity may better capture the extent to which deprivation itself is complex. The IDM moves towards many of the ambitions that have been established to provide better gender data, a more multidimensional understanding of poverty, and more disaggregated data across a breadth of dimensions, with adequate nuance to capture the ways that deprivation is experienced.</p>

I. Background: what are the links between poverty and gender?

A. Initiatives to improve gender statistics across countries

Questions about the link between poverty and gender have been a major topic of public policy discussion for decades. Claims without clear provenance, that women accounted for the majority of those in poverty, circulated for decades.² In 1995, the Beijing Declaration and Platform for Action included the issue of women and poverty as a key area of focus. The official text states that women were the “overwhelming majority” of the more than one billion people in extreme poverty. It further asserts that in the decade leading up to the Beijing World Conference on Women, poverty had increasingly become concentrated among women. While those assertions do not seem to have been supported by available data, they reflected observed realities that gender inequality translated into socio-economic disadvantage. The Beijing Declaration and Platform for Action included better data as Strategic Objective A.4: “Develop gender-based methodologies and conduct research to address the feminization of poverty.”³

In subsequent years, several initiatives were developed to improve statistics on gender across countries — with an aim to better informing policies aimed at improving women’s outcomes across multiple dimensions—including economic opportunity, health, education, political participation, and security. In 2006, the United Nations Statistical Division became the host of the secretariat for the Inter-Agency and Expert Group on Gender Statistics (IAEG-GS). In 2011, the Busan Partnership for Effective Development Cooperation called for better gender disaggregated data “to inform policy decisions and guide investments, ensuring in turn that public expenditures are targeted appropriately to benefit both women and men.”⁴ In 2012, Data2X, an initiative hosted at the United Nations Foundation, was launched by Hillary Clinton to advocate for improved gender data across countries. In 2013, the United Nations Statistical Commission approved the Minimum Set of Gender Indicators, a core set of 52 quantitative and eleven qualitative indicators, as a recommended baseline to countries on gender indicators that should be reported consistently in official statistics.⁵

The importance of gender data was further emphasized by the United Nation’s Independent Advisory Expert Group on a Data Revolution for Development in 2014. The report stated that “many of the issues of most concern to women are poorly served by existing data.”⁶ In 2015, the United Nations published the Handbook on Integrating a Gender Perspective in Statistics, and countries globally pledged to eradicate poverty in all its forms everywhere as the first Sustainable Development Goal (SDG). SDG 5 calls for gender equality and the empowerment of all women and girls. The SDG goals and indicators elevated calls for improved data on gender and sex-disaggregated data. The SDG indicators called specifically for gender and disaggregated poverty estimations while also calling for all indicators to be disaggregated by sex as far as possible. In 2018, the Minimum Set of Gender Indicators was revised to fully align with the Sustainable Development Indicators.⁷

² <https://oxfamblogs.org/fp2p/are-women-really-70-of-the-worlds-poor-how-do-we-know/>

³ <https://www.un.org/esa/gopher-data/conf/fwcw/off/a--20.en>

⁴ Busan Partnership for Effective Development Co-operation, 2011, page 5. <http://www.oecd.org/dac/effectiveness/49650173.pdf>

⁵ <http://unstats.un.org/unsd/statcom/doc13/2013-10-GenderStats-E.pdf>

⁶ The United Nations Secretary General’s Independent Expert Advisory Group on a Data Revolution for Sustainable Development, 2014, *A World That Counts: Mobilising the Data Revolution for Sustainable Development* page 14. <https://www.undatarevolution.org/2014/09/24/warm-welcome/>

⁷ <https://genderstats.un.org/#/home>

In particular, the Sustainable Development Goals and the overarching commitment to 'leave no one behind' call for data to be disaggregated along many dimensions including sex, disability, age and migrant status. Work to strengthen the production of disaggregated data is being taken forward via a dedicated work stream of the Interagency Expert Group on SDG indicators, and through UN regional commissions.

B. Methodological approaches to measuring poverty and inequality

The need for a multidimensional approach to assessing poverty

The most influential and politically salient measure of poverty to date has been the World Bank's poverty definition, initially set at \$1.00 per person per day based on surveys conducted around 1990. This extreme poverty line was generated by averaging the national poverty lines of a couple of dozen low income countries after adjusting them for purchasing power parity. The numbers were drawn from household income and expenditure surveys. In most countries, household consumption is measured through lengthy surveys.

There have been some efforts to calculate different poverty lines based on caloric requirements with different thresholds established for men, women, and children. However, this approach has not been adopted by the World Bank because caloric needs vary so significantly based on personal activity levels, metabolism, etc. A broader consumption estimate averaged across household members is seen as a preferred measure. However, such a measure misses the wide-ranging differences in needs between individuals within a household and how consumption patterns may vary based on many factors.

The World Bank's extreme poverty line numbers were subsequently adjusted based on updated purchasing power parity calculations. The line is currently set at \$1.90 in 2011 PPP.⁸ These estimates are based on a calculation of the household consumption or income divided by the number of residents. It was clear that this approach misses differences in needs and differences in access to household resources that could stem from issues such as gender, disability, or age. This approach also misses non-monetary dimensions of poverty.

The 2014 research report introducing the IDM⁹ highlights four key weaknesses with the International Poverty Line (IPL):

- 1) The IPL is insensitive to differential needs and differential abilities to convert income into achievements.
- 2) The IPL uses the household as the unit of analysis.
- 3) The IPL line appears to be set too low.
- 4) The IPL excludes important dimensions of deprivation.

For these reasons, developing measures of poverty and deprivation that are more sensitive to resources and capabilities of individuals and households has become an important research and policy concern. In 2016, the World Bank's Commission on Global Poverty¹⁰ made a series of recommendations for the World

⁸ In May 2020, the World Bank published updated PPP estimations around the world based on new measures taken in 2017. The Bank has indicated that further analysis will be required to determine if the World Bank's poverty line will be adjusted to the 2017 PPP.

⁹ https://www.individualdeprivationmeasure.org/wp-content/uploads/The-IDM-Report_2014_ChapterOne.pdf. Wisor et al (2014: 3) identify two sets of critiques: internal critiques, which 'focus on the method of setting and updating the poverty line, converting it to the local currency, and gathering the data needed to populate the IPL;' and external critiques, which 'focus on the underlying conception of poverty on which the IPL is based and the procedure by which the IPL is set.'

¹⁰ <https://www.worldbank.org/en/programs/commission-on-global-poverty>

Bank to improve data on poverty. The four concerns with the IPL raised by IDM align well with some of the concerns raised by the Poverty Commission. The Poverty Commission report called for the World Bank to provide more individual-level estimates of poverty, more multidimensional poverty measures, more frequent surveys in most countries, and more surveys in countries where internationally comparable poverty surveys have never been conducted or where such surveys have not been conducted in decades. The World Bank did not accept all of the recommendations by the Poverty Commission.¹¹ However, its attempts to address the issues raised largely consisted of doing additional analysis of existing data (such as creating new monetary poverty lines beside the IPL and developing a multidimensional poverty analysis), committing additional resources for data collection (such as the High Frequency Survey (HFS) to collect data where it generally has not been collected), and committing to developing new survey modules (such as launching the LSMS+ survey to measure intrahousehold inequalities).

The World Bank's efforts on poverty measurement run parallel to the efforts of the IDM. However, the IDM goes beyond the World Bank's efforts in several ways. First, the World Bank's multidimensional poverty research has been very limited by the paucity of multidimensional poverty indicators available in the household income and expenditure surveys from which it is derived,¹² similar challenges have existed in efforts to analyse gender and age inequalities based on existing data. The IDM is explicitly designed to provide multidimensional poverty indicators and can provide a much richer understanding of individual-level deprivation and inequality. Second, the World Bank's efforts to expand data collection has largely been through expensive household income and expenditure surveys or through high frequency surveys which do not provide detailed information about multidimensional poverty or intrahousehold inequality. The IDM is less expensive than these surveys and meets the need of providing multidimensional poverty measures available at the individual level. Thirdly, the World Bank's development of new modules through LSMS+ is closely linked to the objectives of the IDM but the IDM provides data on more dimensions of poverty. These differences between the World Bank's efforts and the IDM will be discussed in further detail below.

Approaches to measuring multidimensional poverty

The largest effort to measure multidimensional poverty has been produced through the work of Sabina Alkire and colleagues at the Oxford Poverty and Human Development Initiative (OPHI). The UNDP added the Multidimensional Poverty Index (MPI) to its suite of metrics used for measuring human development in 2010. The MPI was developed to provide a way to calculate multidimensional poverty globally and uses widely available data, drawing primarily on USAID's Demographic and Health Survey (DHS) and UNICEF's Multiple Indicator Cluster Survey (MICS). The MPI is constructed primarily using household-level indicators. Table 1 describes the indicators, weights, and definitions of deprivation. The MPI establishes definitions of deprivation, thresholds for defining households as poor, and weighting criteria. The MPI gives equal weight to the dimensions of health, education and living conditions. If a household is deprived in a third of the dimensions, they are considered multidimensionally poor.¹³

¹¹ <http://pubdocs.worldbank.org/en/733161476724983858/MonitoringGlobalPovertyCoverNote.pdf>

¹² <https://blogs.worldbank.org/developmenttalk/individual-look-poverty-across-multiple-dimensions>

¹³ <https://ophi.org.uk/multidimensional-poverty-index/>

Table 1: Dimensions and weight of the Multidimensional Poverty Index

Dimension	Indicator	Deprived if...	Weight (%)	Dimension total (%)
Health	Child mortality	Any child has died in the family in the last five years	16.7	33.3
	Nutrition	Any adult (under 70) or child in the family is undernourished	16.7	
Education	Years of schooling	No household member over 10 has completed six years of schooling	16.7	33.3
	Child attendance	Any school-aged child is not attending school	16.7	
Living standards	Cooking fuel	The household cooks with dung, wood, or charcoal.	5.6	33.3
	Sanitation	The household's sanitation facility is not improved (according to SDG standards) or is shared with other households.	5.6	
	Drinking water	The household does not have access to improved drinking water (according to SDG standards) or is at least a 30-minute walk from home, roundtrip.	5.6	
	Electricity	The household has no electricity.	5.6	
	Housing	The household has inadequate housing: the floor is made of natural materials or the roof or wall are of rudimentary materials.	5.6	
	Assets	The household does not own more than one of the following: radio, TV, telephone, computer, animal cart, bicycle, motorbike, or refrigerator and does not own a car or truck	5.6	

Source: Multidimensional Poverty Index, 2020

The international MPI does not specifically consider gender inequality and could mask significant inequalities within a household. Some scholars have explored gender inequalities by comparing poverty prevalence among households headed by women as opposed to those headed by men. Such an approach is possible with the MPI but this approach faces several problems including definitions of headship or household and norms about the roles of women. Additionally, an examination of women-headed households does not necessarily provide insights about women living in households headed by men.

There are other multidimensional poverty measures as well. The MPI program encourages countries to develop their own nationally adapted MPI through the Multidimensional Poverty Peer Network. Gender does not appear to have featured prominently in many of these country level indices. The MPI program has sought to explore intra-household inequalities through a 2019 study of children in South Asia. The analysis focused on what proportion of deprived children live in multidimensionally poor households, what proportion of boys and girls are deprived and what proportion of deprived children live in a household in which other children are not deprived on the same indicator.¹⁴ There have been some studies using non-OPHI data exploring gendered multidimensional poverty analyses. Drawing on the European Union Statistics on Income and Living Conditions (EU-SILC) dataset, Alkire and co-authors developed an index using dimensions of health, education measured at the individual level along with some household-level indicators. They found that women experienced higher levels of multidimensional poverty.¹⁵ In all these studies, analysis has retroactively been conducted to seek intrahousehold inequalities when the survey questions, the sampling framework and the initial analysis was not designed to highlight individual level inequalities. This stands in contrast to the development of the IDM which focuses on measurement at the individual level.

The World Bank has also subsequently published multidimensional poverty indicators, opting for a dashboard rather than an index. The dashboard approach avoids the need to develop and justify weights across different measures. A dashboard provides a more nuanced picture of poverty that does not need to be reduced to a single number. The World Bank's measure drew on data from the Global Monitoring Database which includes most of the surveys used to calculate the World Bank's extreme poverty estimates. The World Bank has far more expansive access to such datasets than other poverty analysts-- allowing them to include income and expenditure data as one of the components of their multidimensional poverty estimates. Household income and expenditure surveys are so customized that the World Bank was unable to provide standardized dimensions of poverty that is possible drawing on the DHS or MICS (as done by the MPI). The World Bank's multidimensional poverty measures include education and health dimensions. For a small subset of countries, violence and security was added as another dimension of poverty. This was only available for a few countries because few countries include such topics on their income and expenditure surveys. The IDM provides a framework for a dashboard-based approach¹⁶ touching on a much wider range of indicators than is possible with these other multidimensional poverty measures. IDM may also provide a much more standardized approach than may be possible for multidimensional poverty than efforts such as the World Bank's multidimensional poverty which was constructed post-hoc from questionnaires that are highly country specific.

Other composite indices

The UNDP has produced several indexes to highlight different aspects of gender inequality. The Human Development Index is hosted by the UNDP, drawing on GNI per capita, life expectancy at birth, expected years of schooling, and mean years of schooling. The Gender-related Development Index (GDI) uses the same components as the Human Development Index but with adjustments to understand gender dynamics,

¹⁴ <https://ophi.org.uk/the-state-of-multidimensional-child-poverty-in-south-asia-a-contextual-and-gendered-view/>

¹⁵ <https://www.ophi.org.uk/wp-content/uploads/Gender-Development-Seminar-Series-World-Bank.pdf>

¹⁶ The IDM also provides an index-based measure of deprivation. The initial construction of a global composite index in 2014 has been reviewed and different approaches to index construction will be presented as part of this phase of the IDM programme.

generating an HDI for men and for women and estimating the ratio between the two.. Rather than focusing on particular dimensions that contribute to or constrain gender equality, the GDI takes account of all data that comprises the HDI (health, education, and command over economic resources) and shows the gap in achievement between men and women. The GNI per capita are calculated by UNDP for the GDI by calculating the proportion of women and men who are “economically active” and--where wage data are disaggregated by gender and sector where available--the estimates are converted in PPP terms. In countries where the UNDP does not have access to gender-disaggregated wage gaps, the UNDP assumes that women earn 80% as much as men, drawing on ILO averages.¹⁷

UNDP’s Gender Inequality Index (GII) is an index drawing on maternal mortality ratio, adolescent birth rates, secondary education attainment (disaggregated by gender), parliamentary seat shares (by gender) and labour force participation (by gender). The UNDP has also created a Gender Social Norms Index (GSNI),¹⁸ which draws on several indicators from the World Values Survey, testing attitudes about inequalities between men and women. The main GSNI measures each indicator at the national level and generates the index for the country. A second approach, the GSNI-2, uses an “intersectional approach” highlighting the number of people experiencing more than one dimension of the GSNI. A final approach, the Gender Norms Index, has sought to use the Alkire-Foster index approach to measure the intensity of biases.

The OECD has generated a Social Institutions Gender Index (SIGI) which measures institutions that influence gender equality under the categories of family code, civil liberties, physical integrity, son preference, and ownership rights. This composite index can draw attention to the policies that may contribute to inequalities. The World Economic Forum has generated a Global Gender Gap Index (GGGI). The index is a composite index of fourteen indicators under the categories of Economic Participation and Opportunity, Educational Attainment, Health and Survival and Political Empowerment. There are benefits to provide institutional, national-level measures; however, such measures may miss key insights about the lived experiences of people. This is particularly true with relation to intersectional identities.

Analysis from Wisor et al in introducing the IDM¹⁹ highlights a few shortcomings with these existing composite indexes: 1) they are often insensitive to the distribution of changes across a population; 2) they include indicators that favour gains by better-off women over those most salient for worse-off women; 3) indices that use population level data provide no guidance on the allocation of resources within a country or within subpopulations; 4) they often exclude important dimensions of deprivation and are constrained by the limits of existing data collection.

A disaggregated perspective on deprivations: opportunities and challenges

The World Bank has also provided more analysis of poverty by gender and age, using the data they hold. In conjunction with UNICEF, the World Bank analysed poverty rates among children using the Global Monitoring Database and relying on a household-level definition of monetary poverty. In a recent study spanning 89 countries (Munoz Boudet et al., 2018),²⁰ the World Bank has also looked at gender differences using the same approach. At the aggregate level, the study finds that men and women are equally likely to live in households in extreme poverty. However, when looking at the intersection of age and gender, the study finds that at certain points in the life cycle, women are more likely than men to live in households in extreme poverty, and that women are more likely to be in households below the poverty line when they are

¹⁷ http://hdr.undp.org/sites/default/files/hdr2019_technical_notes.pdf

¹⁸ http://hdr.undp.org/sites/default/files/frequently_asked_questions_gsni.pdf

¹⁹ https://www.individualdeprivationmeasure.org/wp-content/uploads/The-IDM-Report_2014_ChapterOne.pdf

²⁰ <https://openknowledge.worldbank.org/handle/10986/29426>

under 5 and between ages 20 and 35. Men, on the other hand, are slightly more likely to be in households below the poverty line than women when they are in their 40s and over 65. In 2017, the Socio-Economic Database for Latin America and the Caribbean (CEDLAS) published gender disaggregated income poverty measures for 11 countries in Latin America.²¹ This analysis also showed some significant differences across men and women, but the methodology and sourcing of this analysis is unclear and is no longer available.

As a result, there is a clear need to better examine poverty status and vulnerability within households. A growing number of studies are using specialized or publicly available data across countries to highlight how traditional poverty measures, often collected with household-level data, can mask welfare outcomes for individuals. Lambert and De Vreder (2020), for example, conducted a study of intra-household poverty in Senegal, focusing on subunits within the household which are particularly common due to the complex structure of households associated with polygamy and other factors.²² They conclude that 14 percent of households that are classified as non-poor contain cells that are poor. Similarly, within poor households there are cells that are not poor. This finding, while not providing detail at the individual level, suggests that disaggregating beyond the household level can change the profile of those in poverty, with potential impacts on interventions to address poverty. Brown, Ravallion, and van de Walle (2019) also find, using Demographic and Health Survey data, across Sub-Saharan Africa, that women and children in consumption-nonpoor households are often undernourished, and vice versa. A closer examination across different dimensions is therefore crucial when trying to understand individual-level poverty status and vulnerability – as we discuss further, one of the main contributions of the IDM as well.

Examining how different dimensions of welfare and vulnerability interact, and as it relates to household relationship or marital status, is also key for policymaking. Kumar and Quisumbing (2013)²³ use nationally representative data from Ethiopia to show that fewer resources (including networks) and years of schooling lead to greater food gaps among female-headed households (the number of months they cannot fulfill their food needs). In a study using the Mali Demographic and Health Survey, van de Walle (2013)²⁴ finds that households headed by widows are particularly worse off compared to other households, across a number of outcomes, and that these detrimental effects are also passed onto their children. Within agriculture, studies over the last several years have also discussed how women plot owners, even compared to men plot owners in the same households, face insecure land rights, as well as limited access to input/output markets, extension services and credit, all of which affect their productivity and resilience to shocks (see, for example, Kilic et al., 2020²⁵; Goldstein and Udry, 2008²⁶). Across these different groups, inequalities in resources and rights can affect health and food security as well. Again, as discussed further, another important contribution of the IDM is to make possible examination of how areas of opportunity and deprivation overlap and interact for different cohorts.

Geographically disaggregated poverty estimates have also received increased attention to present more context-specific estimates of poverty. Small area estimations have been a focus of poverty measurement for many years, but more recently, scholars have turned to the use of satellite imagery to provide more granular estimates of poverty. These approaches have also expanded into local estimates of many dimensions of poverty through proxies drawn from satellite imagery and geolocated data from the Demographic and Health Surveys,²⁷ as well as the Living Standards and Measurement Study (LSMS) surveys. For estimating poverty, these approaches have several limitations with decreasing levels of

²¹ See a brief discussion of this at <https://opendatawatch.com/reference/ready-to-measure-phase2-sdg-gender-indicators-draft-for-discussion/>

²² <https://academic.oup.com/wber/advance-article-abstract/doi/10.1093/wber/lhz052/5734985?redirectedFrom=fulltext>

²³ <https://www.sciencedirect.com/science/article/abs/pii/S0306919212001029?via%3Dihub>

²⁴ <https://ideas.repec.org/a/eee/wdevel/v51y2013icp1-19.html>

²⁵ <http://documents.worldbank.org/curated/en/737001582039166195/Getting-the-Gender-Disaggregated-Lay-of-the-Land-Impact-of-Survey-Respondent-Selection-on-Measuring-Land-Ownership-and-Rights>

²⁶ <https://openknowledge.worldbank.org/bitstream/handle/10986/5789/595561.pdf?sequence=2&isAllowed=y>

²⁷ See for instance <https://www.sciencedirect.com/science/article/abs/pii/S0305750X17303443?via%3Dihub>

precision as more granular data is sought. Furthermore, these sources will rely on data collected at the ground level from which geospatial estimates can be generated. The level of modelling required to provide granular geospatial estimates requires strong data estimates. Furthermore, the extent to which modelling is needed for small area estimations means that it is not as easy to consider intersectional exclusion. So while these developments address some important limitations of household surveys mentioned earlier, they do not resolve the limitations that the IDM is addressing.

II. Sources of survey data in measuring dimensions of deprivation, and comparisons with IDM

A. How do other multi-topic surveys compare against areas covered by IDM?

Other large scale (nationally or regionally representative) surveys that have been replicated across countries — and cover similar objectives and themes as the IDM, as well as a focus on individual interviews to collect data on key areas of interest — include the Demographic and Health Surveys (DHS), Multiple Indicator Cluster Surveys (MICS), Living Standards and Measurement Study + (LSMS+) surveys, and the project-level Women’s Empowerment in Agriculture Index module (pro-WEAI; see Malapit et al., 2019). Box 1 describes key features of these surveys.

Box 1. Multi-topic, cross-country household surveys covering individual-level outcomes

Demographic and Health Surveys (DHS): Active in over 90 countries; run by USAID and typically conducted every 5 years. The DHS has a strong focus on reproductive health outcomes for women aged 15-49, as well as nutritional outcomes for women respondents, children aged 0-5, as well as men aged 15-59. The DHS also covers other demographic and socioeconomic characteristics of respondents and households, including age, marital status, education, employment and property ownership, decision-making, and domestic violence. The DHS also conducts specialized surveys focusing on malaria, HIV-AIDS, and surveys of healthcare facilities. The DHS is a major source of data for the Multidimensional Poverty Index.

Multiple Indicator Cluster Surveys (MICS): Covering over 115 countries; run by UNICEF. MICS cover similar respondent- and household-level outcomes as the DHS, but also have a focus on education, employment and health outcomes of children aged up to 17 years.

Living Standards and Measurement Study (LSMS): Run by the World Bank and spanning over 40 countries. They include multiple modules on household assets, consumption, income, and labour among other dimensions. Several LSMS series have been conducted as panel surveys including in Nigeria. The surveys also have a strong focus on agricultural activity and intra-household decision-making roles, particularly as part of the LSMS-Integrated Surveys on Agriculture (LSMS-ISA), which are also frequently conducted over different agricultural seasons. The new LSMS+ surveys also seek to expand the measurement of data on gender across employment and asset ownership rights, through an individual-interview, self-reporting approach.

Project-level Women’s Empowerment in Agriculture Index module (pro-WEAI): the WEAI is the result of a recent partnership between Feed the Future, IFPRI, USAID, and the Oxford Poverty and Human Development Initiative; and has also been adopted for surveys conducted by the UN Joint Programme on Rural Women’s Economic Empowerment. WEAI covers demographic and socioeconomic characteristics of men and women respondents, as well as modules on self-efficacy and decision-making over economic activities (including in agriculture); access to productive capital and credit; a 24-hour time diary for respondents; membership in groups; intra-household relationships; and domestic violence.

There are several ways to assess the relative contributions of IDM compared to these surveys, as discussed below and underscored by Table 2:

- (1) A main contribution of the IDM is to highlight outcomes for particularly vulnerable groups. This includes (a) questions and sampling approaches to more closely examine outcomes for people with disabilities, as well as (b) collecting individual-level data in relation to a wide range of areas including psycho-social health, personal clothing and care that can also reveal important information on the lower extremes of the socioeconomic distribution, as well as intrahousehold vulnerabilities.
- (2) The IDM includes a more nuanced understanding of the challenges faced by survey respondents in accessing resources and opportunities across a breadth of dimensions.
- (3) Altogether, an important contribution of the IDM is to underscore the circumstances of the most vulnerable individuals across multiple dimensions, including highlighting how these dimensions overlap and interact with each other. This can give policy makers very specific and nuanced understanding of specific challenges faced by certain populations.

(1) Highlighting outcomes for the most vulnerable

(1a) Sampling approaches: purposive sampling of those with disabilities

Apart from the individual-level approach and attempting to interview all adult members in the household, which the more recently-developed LSMS+ and pro-WEAI share, the IDM employs unique survey approaches that shed greater light on outcomes for respondents with greater vulnerability. This includes, for example, integration of the Washington Group Questions on disability, enabling disaggregation by disability, and the option of purposive sampling of individuals with disabilities. Among other nationally or regionally representative surveys, the share of respondents with disabilities is often too small to be able to pick up meaningful information on this group. This is despite substantial evidence that women lose more healthy life to disability compared to men, including excess disease burdens unrelated to motherhood such as Alzheimer's disease, dementia, depression, osteoarthritis, and other disabilities (Buvinic et al., 2014).

The IDM utilises the efforts to advance disaggregated data on disability through the United Nations Statistical Commission and specifically the Washington City Group on Disability Statistics, established in 2001 to improve standards on measuring disability prevalence and disaggregation by disability.²⁸ The Titchfield City Group on Ageing Statistics and Age-Disaggregated Data was established in 2018.²⁹ To date, this group has primarily focused on understanding the landscape of data on ageing populations, issues of concern for ageing populations, improved conceptual frameworks for understanding ageing and ageism and ways to increase knowledge sharing among stakeholders. Some of the key issues highlighted have been improved data on pensions and social protection, better frameworks for assessing the demographic dividend, better statistics on ageism, long-term care, elder abuse, concerns around standard age caps on surveys and specialized surveys on older populations. Many of the issues addressed are intersectional and

²⁸ The Washington Group (WG) developed questions to enable comparable data cross-nationally for populations living in a variety of cultures with varying economic resources. The WG Short Set (WG-SS) of six questions were developed primarily for use in national censuses or surveys on topics other than disability so a few questions can be added to any survey to make it possible to disaggregate data by disability. The WG-SS have been added to dozens of household surveys and censuses as well as some administrative data intake systems. Where more information about disability is required, the WG Extended Set of questions on Functioning is recommended, which cover vision, hearing, mobility, cognition, affect (anxiety and depression), pain, fatigue, communication, upper body functioning, functioning with and without the use of devices/aids where applicable, age at onset of functional difficulty, and environmental factors that may influence functioning and/or participation.²⁸ A module for children has been added to the latest round of UNICEF's Multiple Indicators Cluster Surveys.

²⁹ <https://unstats.un.org/unsd/methodology/citygroups/Titchfield.cshtml>

UN Women has been an active participant and has been on the steering committee. Because the IDM collects data about older individuals (it samples adult respondents of all ages) and disability as recommended by the Washington Group, it can contribute insights regarding the overlap between age and functional disability as measured by the Washington Group Short Set of Questions, to inform methodology and analysis.

(1b) Coverage of topics relevant to the highly vulnerable

The IDM also covers topics not well-covered in other surveys on particularly vulnerable groups:

- (i) This includes individual-level data on access to basic clothing/footwear and personal care items, for example. Other surveys have data on individual health and/or ownership and rights to specific assets, but individual-level data on personal items tends to be scarce (the LSMS, for example, collects data on clothing expenditure as part of the household consumption module, and this data is not collected by the DHS, MICS and WEAI). Variation in this data is likely to highlight those at the bottom extreme of the socioeconomic distribution, or who face other extremes of treatment within their household, and are therefore a critical group to consider when examining deprivation, both between and within households.
- (ii) The IDM also covers psycho-social health within health status, which again focuses needed attention on vulnerable groups whose visibility is otherwise limited in most surveys. Buvinic et al. (2014), in particular, discuss the importance for examining mental health, particularly among women who face multiple time burdens across economic activity and child care, tend to live longer than men, and can face significant stresses related to pregnancy and childbearing. The 2017 Global Burden of Disease Study (GBD),³⁰ the most comprehensive worldwide observational epidemiological study to date, also finds that the share of women experiencing any mental health disorder among several conditions collected in the survey (including depression and anxiety) is higher than that for men.

As Table 2 shows, within health, comparable surveys tend to focus mainly on nutritional indicators and access to health insurance; the DHS also has a specific focus on reproductive health outcomes for women of reproductive age, as well as illnesses and other health-related outcomes for women's children. However, chronic illnesses or conditions for adults (incidence and seeking treatment), and mental health disorders, are not covered in detail. Furthermore, data on older women is frequently missing because DHS and MICS generally cap their women's surveys to exclude women over 49. Data on older men is also limited as these surveys generally cap the men's survey at 49.³¹

(2) Addressing risks faced by respondents

Table 2 highlights areas where dimensions/themes covered in the IDM overlap with other surveys, and (as indicated by grey-shaded boxes) where the IDM covers areas that are not addressed in these surveys.

³⁰ <https://www.thelancet.com/gbd>

³¹ The DHS Men's questionnaires generally are more likely to administer the men's questionnaire to men over 49. Some surveys administer the Men's Questionnaire to men 15-54, 15-59, 15-64 or all men older than 15.

Table 2. Comparing main IDM dimensions and themes with DHS, MICS, LSMS+ and pro-WEAI ^(1,2)

	Dimensions/ themes in IDM	DHS	MICS	LSMS+	pro-WEAI
1	Food/hunger (IND)	IND-biomarker questionnaire	IND (only children under age 5): anthropometrics and diet	IND – food insecurity module (FIES)	IND-nutrition module (being developed; mostly focused on women’s decision-making over their food consumption)
2	Drinking water (HH)	HH – water module	HH – water module	HH – access to facilities; IND – time spent in water collection	
	Domestic water (HH & IND),	HH – water module	HH – water module	HH – food security module	
	Water collection threats (I)				
3	Habitability (HH)	HH – housing	HH – housing	HH – housing	
	Ownership of essential household items (HH)				
	Security of tenure (HH & IND)				
4	Health care – access and quality (IND)	IND – women’s questionnaire (sexual and reproductive health, and children’s health); health insurance coverage for all respondents (adults/children)	IND – women’s questionnaire (sexual and reproductive health, and children’s health); health insurance coverage for all respondents	IND – health module (details on last visit to health provider in the last month and year; cognitive difficulties; details on women’s last birth; whether children under 5 had diarrhea in last 2 weeks)	
	Health care – status (including psycho-social health status) (IND)			IND – labor module (whether too ill to work)	
5	Education level (IND)	IND – education module	IND – education module	IND – education module	*
	–Functional literacy and numeracy (IND)	IND – education module	IND – education module	IND – education module	*
6	Energy – cooking fuel (primary and secondary), and harm from smoke (HH & IND)	HH – access to facilities (harm from smoke not included)	HH – access to facilities (harm from smoke not included)	HH – access to facilities (harm from smoke not included)	*
	Energy – access to electricity (HH & IIND)	HH – access to facilities	HH – access to facilities	HH – access to facilities	*
	Energy collection threats (IND)				
7	Sanitation – facilities (HH &IND)	HH – access to facilities	HH – access to facilities	HH – access to facilities	*
	Private changing place (during				

	menstruation) (IND)				
8	Relationships – dependence and support, community participation (IND)	IND – men’s and women’s questionnaires		IND – decision-making roles over assets (land); nonfarm enterprise activity	IND – input in productive economic decisions, health care (being developed); control over use of income; motivation for decision-making
	Family relations – personal support (IND)			IND – lending sources	IND – lending sources; questions on respect among HH members
9	–Basic clothing and footwear (IND)				
	Clothing – personal care and sanitary products (IND)				
10	Violence – experience and risk³²	IND – women’s questionnaire	IND – one question on women’s and men’s attitudes towards domestic violence		IND – one question on attitudes towards domestic violence against women
11	Family planning – access (IND)	IND – women’s and men’s questionnaires	IND – women’s questionnaire		
	Family planning – use (IND)	IND – women’s and men’s questionnaires	IND – women’s questionnaire		
12	Environment: exposure to environmental problems (HH)	HH – use of different types of fuel; GPS data allows link with external climate and geographic variables	HH – use of different types of fuel; GPS data allows link with external climate and geographic variables	HH – natural disasters experienced; use of different types of fuel; GPS data allows link with climate and geographic variables	
	Environment: Natural resource utilization; safe environment (IND)				
13	Voice – participation (ability to raise issues in the community) (IND)				IND – module on leadership and influence in community; module on self-efficacy
	Voice – influence (ability to change things in the community) (IND)				
14	Time use – labour burden (IND)			IND – time in paid and unpaid activities	IND – time use diary; data collection on secondary activities (focused on childcare)
15	Paid and unpaid work – respect (IND)				

³² The IDM survey module aimed at measuring violence is not currently being enumerated as findings from use in a number of contexts indicated measurement error. A replacement module will be developed.

	Paid and unpaid work – risk (IND)				
A	Asset ownership and control (IND)	IND – ownership of land or dwelling		IND – asset ownership and rights	IND – access to productive capital
I	Formal identity document (IND)			IND – whether individual has birth certificate/ registration document	

Notes:

(1) IND = questions asked separately of individuals in the household; HH = one individual asked per household

(2) In addition to 15 main dimensions, data about asset ownership and control is also collected, as well as contextual data on basic demographic and socioeconomic characteristics of respondents and households, including whether the respondent has a formal/legal identity document.

* A household-level module on characteristics of individual household members (including Indicators related to individuals' education and other household characteristics) was collected as part of the [Feed the Future Population Survey](#) that complements the WEAI.

Table 2 shows that hazards, and related social norms that affect or risk the availability of resources to individuals, are key contributions of the IDM relative to other surveys. On access to facilities and infrastructure, for example, this includes hazards with water collection, non-clean cookstoves, sanitation with lack of privacy, and reasons for not accessing healthcare (not asked in the DHS as well). Respondents' perceptions of safety when they are alone inside/outside their home is also not asked in other surveys. Across unpaid and paid work, the degree of respect received, and risks are also key for understanding women's empowerment from economic activity, but are not collected systematically in comparable large-scale surveys. An increasing number of empirical studies are looking at how risks are distributed unequally within households, and that men and women within households experience and respond differently to risks — underscoring the importance of collecting this data.

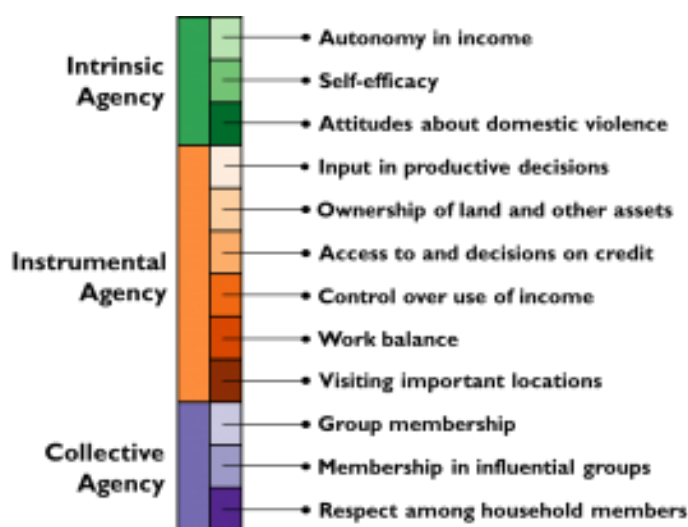
Data on social networks, agency and norms — including respondents' personal relationships/support networks, and their ability to voice concerns in the community (towards changing their circumstances) — is also a specific contribution of the IDM. Agency, a key component of Kabeer's (1999) discussion on women's empowerment, has not been well-covered in large-scale surveys, despite the interest in developing gender-sensitive indicators. Donald et al. (2020) discuss how the measurement of agency in surveys can be broken into goal setting, perceived control and ability ("sense of agency" which includes self-efficacy), and acting on goals or decision-making. Support from personal relationships and the ability to voice concerns in public are tied to self-efficacy. The IDM asks a series of questions on respondents' dependence on people not living with them for basic needs, whether resources are sufficient, and if the respondent feels they could reciprocate. The pro-WEAI is the only other survey to include additional questions on self-efficacy and intrahousehold relationships (Malapit et al., 2019), although the focus of these questions is less on support networks and more on whether household members respect one another, reflecting the different measurement purposes of the IDM (poverty) and the pro-WEAI (women's empowerment in the context of agriculture and development projects).

The WEAI, which has evolved more recently to the pro-WEAI with additional questions on self-efficacy, domestic violence, mobility, and intrahousehold relationships (Malapit et al., 2019), is another recent development that addresses key aspects of agency. In particular, the pro-WEAI focuses on measuring three types of agency: intrinsic agency (power within), instrumental agency (power to), and collective agency (power with) (Figure 1; Martinez and Seymour, 2018).

Among additional indicators collected by the IDM (apart from the 15 main dimensions), the inclusion of a variable on whether men/women have a legal identity document is also a crucial contribution (only the recent Tanzania LSMS+ has a similar question, on whether individuals aged 12 and older have a birth

certificate or registration). Being able to count these individuals is critical for understanding who can claim rights and access government services, and how this relates to life circumstances as measured by the IDM.

Figure 1. Domains and Indicators of the pro-WEAI



Source: Martinez, Elena, and Greg Seymour. 2018. [“Introducing pro-WEAI: A tool for measuring women’s empowerment in agricultural and development projects.”](#) Gender, Agriculture, and Assets Project (GAAP2), International Food Policy Research Institute (IFPRI).

(3) Highlighting overlapping dimensions, and participant ranking of dimensions

Apart from coverage of specific areas that are not well-addressed in other surveys, the IDM allows for a joint analysis of multiple deprivations, and for respondents with different individual and socioeconomic characteristics. As a result, one can get a more precise picture of specific groups that are particularly vulnerable across multiple areas, along with factors associated with their situation. Policymaking, in turn, can benefit greatly from a clearer understanding how different deprivations interact with one another in each population.

On a similar note, one of the biggest differences between the IDM and the DHS, MICS, and High Frequency Survey (HFS) is the ranking of the topics discussed by respondents. This exercise is relatively time-intensive, but the approach is strongly approved by people seeking to reduce the controversy of expert-based definitions of poverty or deprivation, and ground interpretation of relative deprivations in a local socioeconomic and cultural context. There are several efforts to develop similar community-defined definitions of poverty. One similar exercise has been conducted in several contexts by Anirudh Krishna at Duke University.³³ Similarly, UNICEF Uganda has carried out several consensual deprivation poverty

³³ <https://global.oup.com/academic/product/one-illness-away-9780199584512?cc=us&lang=en&>

measurement exercises, focusing on child poverty.³⁴ While relying too heavily on this ranking can affect cross-country or regional comparability, it can be helpful for policy planning at a local level.

B. Overlap of questions with high-frequency surveys and the DHS/MICS

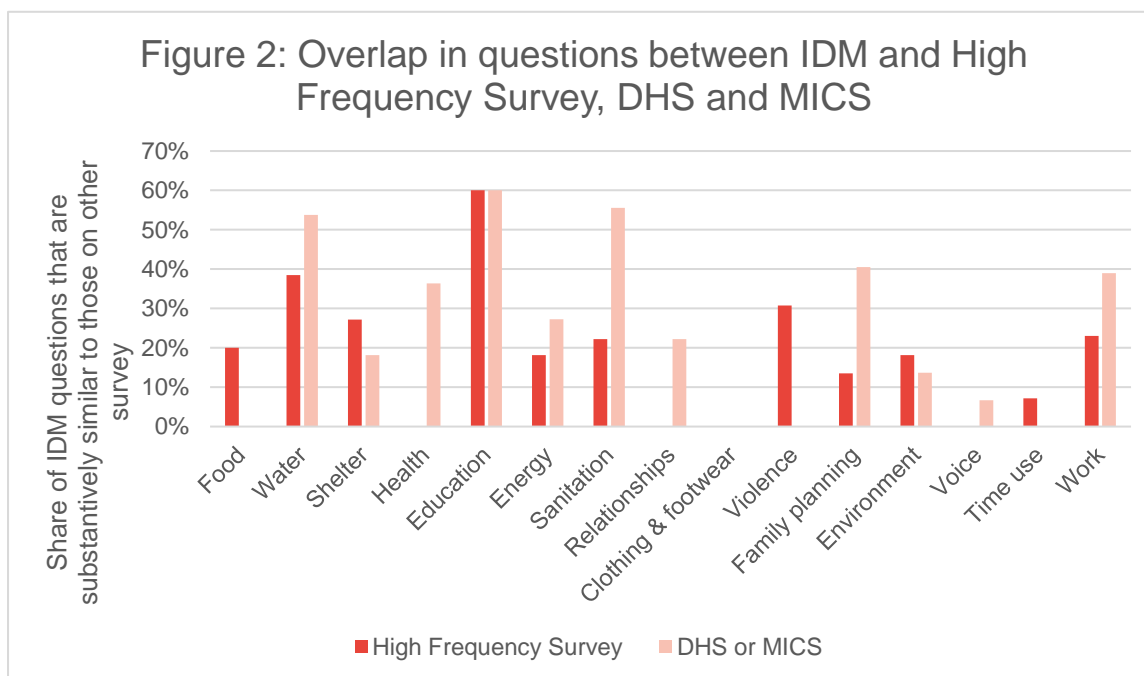


Figure 2 also presents an alternate comparison of question coverage across the IDM dimensions, in comparison with the DHS/MICS and the World Bank Somalia High Frequency Survey (Wave 1 and Wave 2). The World Bank has deployed various surveys historically to provide timelier, less expensive household surveys. In 2016, the World Bank launched a High Frequency Survey programme. This program was developed to fill two gaps. First, it was generated in an acknowledgment that in contexts with high levels of insecurity and violence, it is not possible to safely carry out the listing exercise or the lengthy surveys that are required to produce a typical household survey. The High Frequency Survey was deployed in South Sudan and Somalia to provide an approach that would substantially reduce the risks for enumerators and to measure poverty. The approach developed generates a household survey with a consumption module. The module includes a core module and two optional modules. Each household surveyed is given a core module and one of the optional modules. Through multiple imputations the values of one module are imputed to the other module. This allows for surveys to be conducted in less than an hour. The High Frequency Survey does not focus on gender and no efforts are made to produce high quality gender disaggregated estimates. The HFS measures poverty at the household level. Still, this survey provides a powerful tool for estimating poverty in contexts where data are outdated or non-existent.

One first difference between the IDM and other survey approaches is the identification of dwellings, rather than households, as the sampling unit, with the aim of being more inclusive (e.g., within a dwelling may be the main household plus servants). The IDM uses a dwelling rather than a household roster, to identify individuals and households in the dwelling. The other household survey programmes generally focus on the level of the household. De Vreyer and Lambert (2020) provide an example of an alternative approach to organizing household sub-units and grouping household cells is similar grouping by dwellings. It is possible that the IDM could reduce some of the sampling to question the most informed individuals within each

³⁴ <https://www.unicef.org/uganda/reports/multidimensional-child-poverty-and-deprivation-uganda-report-volume-2>

dwelling. The cells approach would highlight inequalities within a household, but more research would be needed to show if such an approach would be sufficient to highlight gender inequalities. Research by the Social Research Centre has suggested that reducing IDM's sampling in each dwelling to two primary adults plus two other adults would reduce the sample without sacrificing too much information.

Figure 2 shows the share of the questions that overlap with other surveys because of substantive similarities both in questions asked and because of the collection of individual-level data. This analysis goes beyond the thematic-level analysis in Table 2 by extending the analysis to the level of survey questions. The analysis of the questions suggests that across the 15 dimensions of the IDM, there is relatively little overlap with questions on the DHS, MICS or HFS. For three dimensions--education, sanitation, and water--most of the data points would substantively be similar if collected by one of the other surveys. None of the data collected by the IDM on health, relationships, clothing and footwear, or voice is collected by the HFS. DHS and MICS do not provide any overlapping data with IDM on food, clothing and footwear, violence, or time use.

The ranking of dimensions included in the IDM to provide data about respondent preferences generates information that is not substantively included in the DHS, MICS and HFS. There is some overlap between asset ownership questions in the IDM and related questions in other surveys. 21% of the questions on assets in the IDM overlap with the HFS, and 5% of the questions on assets are covered by the DHS or MICS. This suggests that using IDM data to generate a wealth index like the DHS wealth index, is likely to show unique insights.³⁵

III. South Africa Data Comparisons

South Africa provides an interesting case study of the contributions of the IDM because it has done a relatively high amount of research on inequalities. Statistics South Africa published a report called the *Men, Women and Children 2014/15* based on the analysis of the Living Conditions Survey (LCS 2014/15).

The report focuses primarily on household headship. The survey also found some interesting trends among the definitions of headship. The survey analysis describes households as being single (22%), nuclear (39%), extended (36%) or complex (3%). About 50% of the households headed by women are extended while about 46% of male-headed households are nuclear. These different family structures also have very different levels of reported poverty. The data suggest significant inequalities in consumption by household head. Expenditures were categorized into several categories including housing, food, transport, and miscellaneous expenses. Households headed by Black women averaged spending less on housing, food, and transport combined than households headed by white men spent on miscellaneous expenses. Inequalities in South Africa are especially apparent through an intersectional framework.

Data from the LCS 2014/15 was collected using weekly surveys drawing on diaries kept over a week. Each household in the data set required three interviews. The analysis focuses on consumption, access to water, electricity, and sanitation. Most of the analysis focused on three poverty lines, a food poverty line, an upper bound poverty line (UBPL) and a lower bound poverty line. Most of the analysis focused on the upper bound poverty line. The poverty line suggested that 19.6% of women-headed households were below the food poverty line compared to only 10.1% of men-headed households. 40% of the population lived in households below the upper bound poverty line nationally. 55% of the population lives in households below the UBPL in Limpopo and 26% did in Gauteng (the second lowest rate after Western Cape at 25%). That

³⁵ IDM assets data has been used to construct a wealth index in line with the methodology used by the DHS wealth index. Comparative analysis of the insights the IDM offers is underway and will be published when finalised.

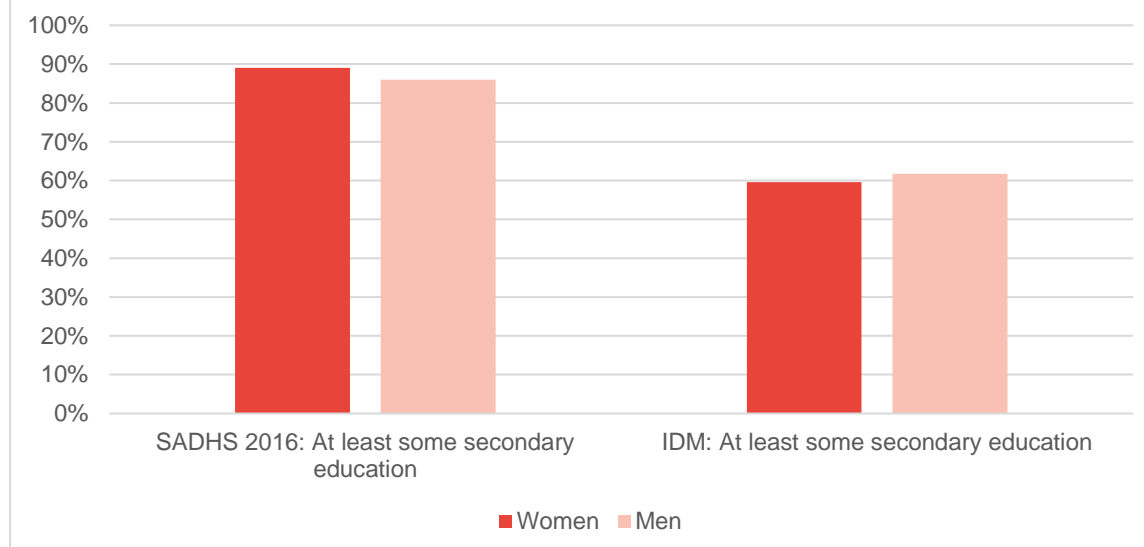
would suggest the two provinces selected for purposive disability sampling would show the two ends of the distribution with respect to household poverty.

The LCS 2014/15 did not collect data on many other dimensions of poverty but it reports that 95.5% of female-headed households are connected to electricity compared to 93.9% of male-headed households. The IDM finds that 94% of respondents report having an electricity connection but IDM also collects data on the reliability of that electricity, whether or not the lighting source is clean, whether or not people face hazards or threats when collecting fuel for cooking or lighting and whether or not there is enough energy to meet needs. Further, the IDM provides this (and other data) disaggregated by disability status. The *Men, Women and Children 2014/15* report included analysis of children which was not included in the IDM analysis. This analysis was of children in households defined as being below the poverty line. The report found that the gender breakdown of children did not appear different between households in poverty and those out of poverty. The report also states that poverty was highest among households headed by Black women and lowest among those headed by white men. Rates were lower in formal urban settings and higher in rural or informal urban settings.

The South Africa Demographic and Health Survey 2016

The South Africa Demographic and Health Survey 2016 was more extensive than most comparable surveys. The survey sampling was somewhat more complicated than in most DHS surveys. In half of the households, women ages 15-49 were given the individual survey, one woman per household was given the domestic violence questionnaire, and a survey of the caretaker was given for all children ages 0-5 whose biological mother was not living in the household. For the other half of the households, women 15-49 were given the individual questionnaire and the adult health module, women ages over 50 and men over 60 were given the adult health module, one woman over 18 per household was given the domestic violence questionnaire, women and men over 15 were given the biomarker questionnaire as were all children 0-5, and caregiver surveys were administered for each child 0-5 whose biological mother was not in the household. Women could be surveyed if they lived in the household or if they were a visitor who had spent the night before the survey in the household. The Washington Group questions were administered to all individuals over age five. 11,083 households were surveyed, 8,514 women questionnaires were administered, 3,618 men did the adult questionnaire, and 10,336 adults over 15 were interviewed. The survey also included salt iodine tests. As a result of the more extensive questions, the broader age ranges for questions and the inclusion of a larger subsample of men, the South Africa Demographic and Health Survey included a much larger share of individuals within a household than typical DHS.

Education attainment IDM 2019 and South Africa DHS 2016



Due to time constraints and data limitations the most comparable sections between the SADHS and the IDM were not available for analysis. While it is possible to compare thematic issues between the two surveys, specific questions were not similar enough for a meaningful comparison. One exception is education. The SADHS suggests that a much higher share of the adult (15-49) population has had some secondary education than the IDM would suggest. The two sources also provide slightly different perspectives about who is more deprived when disaggregated by gender. These differences may be driven by changes that happened in South Africa between 2016 and 2019 or they may reflect IDM's broader sampling strategy.

On sanitation the two sources differ as well. 70.5% of men are least deprived of toilet facilities compared to 66.7% of women. The DHS defines adequate sanitation using similar variables but does not provide gender disaggregated data. The DHS found that 73% of households have improved sanitation while another 22% had shared sanitation. The DHS indicates that 92% of households have improved water but that about 31% of the households with piped water or a borehole had experienced a disruption in service at least one day in the two weeks prior to the survey. IDM reports that 36% of households were least deprived of domestic water access with little difference between men and women. IDM's definition of being least deprived accounts both for the way that the water is delivered to the household but also the treatment methods, the methods used to purify water and the reliability of the water source. This suggests that the IDM measure may be more sensitive to needs that may not have been identified by the DHS.

South Africa published a Voluntary National Review (VNR) of the Sustainable Development Goals in 2019. There are relatively few indicators discussed that are gender disaggregated. The Victims of Crime Survey 2017/18 was referred to. In 2018/19 the GPSJS (the Governance, Public Safety and Justice Survey)³⁶ replaced the Victims of Crime Survey. Many of the questions remained the same with some modifications from the Victims of Crime Survey. These surveys included questions using the following format, "Have you or any member of your household experienced housebreaking in the past 12 months?" These questions were followed by, "How many times have you or any member of your household experienced housebreaking in the past 12 months?" Various crimes were listed following the same template. This survey also included questions about perceptions of safety and household living conditions, income, source of income, perceived wellbeing and water and sanitation.

³⁶ <http://www.statssa.gov.za/publications/P0341/P03412018.pdf>

The perception of safety question is similar in the GPSJS and the IDM. In the IDM people are classified as least deprived if they feel very safe when at home alone and while walking alone in the neighborhood or if they feel very safe for one of those two situations and feel safe for the other. The IDM finds that only 6.9% of women are least deprived compared to 20.4% of men. The GPSJS formulates the question slightly differently but asks if people feel safe when walking alone in their area of residence during the day and when it is dark. They find that 10.8% of women feel very safe walking alone when it is dark compared to 13.0% of men. This suggests that the gender gap on perceived safety is lower based on the GPSJS. Unlike other data comparisons, the data collected for the GPSJS were primarily collected simultaneously to the IDM so differences are probably likely to be differences in measurement rather than trends. The differences may also be due to the GPSJS not collecting data from all adults in households.

The VNR drew on the DHS survey for data about gender-based violence. It also draws on the DHS for data on access to water, sanitation, and electricity. These indicators are reported at the household level and are not reported with any gender-related disaggregation in the VNR.

The VNR also refers to *Beyond Numbers: A Gender Audit of the May 2019 South Africa Elections*. This report was written by Kubi Rama and Colleen Lowe Morna for Gender Links for Equality and Justice and the African Women's Development Fund. The report focuses primarily on progress towards the goal of gender parity for elected positions at all levels of decision making in the country. The report also includes an analysis of the platforms and efforts of parties and media portrayal of gender issues within the context of the election. The report notes that about 55% of voters have been women in the past four elections but that only 20% of the sources cited in media coverage in the 2019 election were women. The IDM addresses the issue of voting by asking people if they voted in the last election and were free to choose whom to vote for. The IDM found that men were more deprived than women with about 50% of them being least deprived compared to about 61% of women.

South Africa is a leader in developing official statistics, frequently taking a prominent role in advancing indicators on inequalities. The South Africa DHS 2016 is among the most comprehensive DHS surveys in the world because of its expanded criteria for including more respondents per household but also because of the breadth of modules considered. The South Africa DHS provides several points that are more comprehensive than the IDM, particularly through its tests for a range of health issues. However, IDM provides a much more nuanced information about gender inequalities in the dimensions of multidimensional poverty measured by the IDM, the relationship between disability and multidimensional poverty, and provides data on many indicators beyond what is currently offered in other multi-topic household surveys. Government, civil society and academic stakeholders have demonstrated interest and enthusiasm since the ANU team have begun sharing results of the initial analysis of the data from the IDM South Africa study (published in May 2020).

IV. Conclusion

The IDM provides a breadth of indicators filling many of the key gaps in existing data systems. While many of the concepts measured by the IDM are captured in many forms in varied surveys, many of them are rarely collected or would provide substantially different information if based on individual-level data. The analysis of the themes showed that some general themes included in the IDM are not widely collected by major household survey programmes. A closer analysis of specific questions shows that the IDM's questions would be expected to provide different data than most other major household survey

programmes because the IDM focuses on comprehensive questions touching on multidimensional poverty along dimensions and that could provide insights through individual surveys.

Poverty is complex and multifaceted—particularly when considered through an intersectional lens. An analysis of the data suggests that richer, individual level measures can significantly increase the nuance available for understanding the extent to which there are within household differences on the dimensions measured by the IDM.

One of the major challenges faced to providing this understanding is statistical power. Calculations of statistical power are an important element of sampling decisions. In cases where there is consistently little substantive difference between genders (or intersectional subpopulation); it is important to ensure that sample sizes are adequate. However, increasing the sample size is linked to cost and logistical challenges. This may be particularly challenging in small island developing states where populations are small.

Survey experiments are frequently carried out in academic settings and by the World Bank to identify the value of additional questions and sampling techniques. The High Frequency Survey discussed above is one such example. These approaches may add to initial costs but could highlight the marginal value of additional or particular questions or the marginal value of different sampling techniques within a household. The LSMS+ has carried out such experiments with individual level surveys for large multitopic surveys but it may be possible and worthwhile to attempt such an approach with a shorter survey such as the IDM.

The IDM fills key gaps by increasing knowledge about intrahousehold inequalities which have generally only been superficially considered in household surveys. IDM also provides greater depth along many of the key topics measured in many of the major international surveys such as household assets, living conditions, and health. The IDM also brings modules to the survey that are frequently collected separately such as questions about voice and food insecurity. The inclusion of these dimensions allows for more cross tabulation to identify the extent to which people are deprived across dimensions.

IDM also allows for more intersectional analysis of poverty. This is ultimately possible because the IDM collects data at the individual level. However, it is also facilitated by the integration of the Washington Group Extended Set of Questions, which enable disaggregation of data by disability (with data boosted in some instances through purposive sampling), the inclusion of non-binary gender identification (though with acknowledged challenges in enumeration and analysis), and not using upper age caps in surveys. These choices allow for much richer analysis of the relationship between individual characteristics and circumstances, and identification of patterns of disadvantage by social group. They also add substantially to the complexity of enumeration and survey analysis. This complexity may better capture the extent to which deprivation itself is complex. The IDM moves towards many of the ambitions that have been established to provide better gender data, a more multidimensional understanding of poverty, and more disaggregated data across a breadth of dimensions, with adequate nuance to capture the ways that deprivation is experienced.

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